

WHAT IS CLAIMED IS:

1. An electrode structure including a conductive film formed on a base substrate through an insulation film, the insulation film comprising a plurality of poles of polyimide, a first film formed on side surfaces of the poles and formed of an insulation material having a higher hardness than polyimide, and a second film of polyimide buried among said a plurality of poles with the first film formed on the side surfaces thereof.

2. An electrode structure including a conductive film formed on a base substrate through an insulation film, the insulation film comprising a first film of polyimide having a plurality of openings which reach the base substrate, a second film formed on inside walls of the openings and formed of an insulation material having a higher hardness than polyimide, and a plurality of poles of polyimide buried in the openings with the second film formed on the inside walls thereof.

3. A semiconductor light-emitting device having an electrode structure including a conductive film formed on a base substrate through an insulation film,

the insulation film comprising a plurality of poles of polyimide, a first film formed on side surfaces of the poles and formed of an insulation material having a higher hardness than polyimide, and a second film of polyimide

buried among said a plurality of poles with the first film formed on side surfaces thereof.

4. A semiconductor light-emitting device according to claim 3, wherein

the first film is also formed on upper surfaces of the poles.

5. A semiconductor light-emitting device having an electrode structure including a conductive film formed on a base substrate through an insulation film,

the insulation film comprising a first film of polyimide having a plurality of openings which reach the base substrate, a second film formed on inside walls of the openings and formed of an insulation material having a higher hardness than polyimide, and a plurality of poles of polyimide buried in the openings with the second film formed on the inside walls thereof.

6. A semiconductor light-emitting device according to claim 5, wherein

the second film is also formed on upper surfaces of the first film.

7. A semiconductor light-emitting device according to ~~any one of claim 3~~, wherein

the conductive film is formed on the insulation film through a third film of an insulation material.

8. A semiconductor light-emitting device according to ~~any one of claim 5~~, wherein

the conductive film is formed on the insulation film through a third film of an insulation material.

a 9. A semiconductor light-emitting device according to ~~any one of~~ claim 3, wherein the conducting film is a bonding pad.

a 10. A semiconductor light-emitting device according to ~~any one of~~ claim 5, wherein the conducting film is a bonding pad.

11. A semiconductor light-emitting device according to ~~any one of~~ claim 3, wherein the insulation film is formed on a layer formed on the base substrate and formed of a material having a higher hardness than the polyimide.

12. A semiconductor light-emitting device according to ~~any one of~~ claim 5, wherein the insulation film is formed on a layer formed on the base substrate and formed of a material having a higher hardness than the polyimide.

13. A semiconductor light-emitting device including a waveguide, a lower electrode formed below the waveguide, and an upper electrode formed above the waveguide, the upper electrode having an electrode structure according to claim 1.

14. A semiconductor light-emitting device including a waveguide, a lower electrode formed below the waveguide, and an upper electrode formed above the waveguide,

the upper electrode having an electrode structure according to claim 2.

15. A semiconductor light-emitting device according to claim 13, further comprising

a high resistance layer formed on a side of the waveguide; and

an electrode structure according to claim 1 formed on the high resistance layer.

16. A semiconductor light-emitting device according to claim 14, further comprising

a high resistance layer formed on a side of the waveguide; and

an electrode structure according to claim 2 formed on the high resistance layer.

17. A process for fabricating an electrode structure including a step of forming an insulation film on a base substrate, and a step of forming a conductive film on the insulation film,

the step of forming the insulation film comprising a step of forming a plurality of poles of polyimide on the base substrate, a step of forming on side surface of the poles a first film of an insulation material having a higher hardness than polyimide, and a step of burying a second film of polyimide among the first film.

18. A process for fabricating an electrode structure including a step of forming an insulation film on a base

substrate and a step of forming a conductive film on the insulation film,

the step of forming the insulation film comprising a step of forming on a base substrate a first film of polyimide having a plurality of openings which reach the base substrate, a second step of forming on inside walls of the openings a second film of an insulation material having a higher hardness than polyimide, and a step of forming a plurality of poles of polyimide buried in the openings with the second film formed on the inside walls thereof.